

I claim:

1. A device for forming an image on a printing plate, comprising at least one laser, and an optical system for forming an image of radiation from the laser on the printing plate, said laser radiation having ultrashort pulses with a duration of less than 1 ns.
2. The device for forming an image on a printing plate according to claim 1, wherein said laser radiation is generatable by a semiconductor laser.
3. The device for forming an image on a printing plate according to claim 1, wherein said laser is installed for multimode operation and is mode-coupled.
4. The device for forming an image on a printing plate according to claim 1, wherein said one laser has a supply current with ac and dc components.
5. The device for forming an image on a printing plate according to claim 1, wherein said one laser is an individual diode laser for generating the laser radiation.
6. The device for forming an image on a printing plate according to claim 1, wherein said at least one laser is a diode laser array for generating the laser radiation.

7. The device for forming an image on a printing plate according to claim 6, wherein said diode laser array comprises individually drivable single-strip diode lasers.

8. The device for forming an image on a printing plate according to claim 1, including a control arrangement for temperature regulation of the laser.

9. The device for forming an image on a printing plate according to claim 1, wherein said optical system for forming an image of the radiation on the printing plate has reflective elements.

10. The device for forming an image on a printing plate according to claim 1, wherein said optical system has micro-optical elements.

11. The device for forming an image on a printing plate according to claim 4, wherein said dc-component is able to be modulated.

12. A printing unit, having at least one device for forming an image on a printing plate, comprising at least one laser, and an optical system for forming an image of radiation from

the laser on the printing plate, said laser radiation having ultrashort pulses with a duration of less than 1 ns.

13. A printing machine, comprising at least one printing unit having at least one device for forming an image on a printing plate, said device including at least one laser, and an optical system for forming an image of radiation from the laser on the printing plate, said laser radiation having ultrashort pulses with a duration of less than 1 ns.